Jonathan D. Phillips—Curriculum Vita Employment and Professional Experience

•Professor, Department of Geography, University of Kentucky, 2000 – 2020. Professor Emeritus, 2021-

•Adjunct Professor, Department of Geography, Planning & Environment, East Carolina University, 2020-

•Research Scientist, Department of Forest Ecology, Sylva Tarouca Institute, Brno, Czech Republic

•Chief Scientist, Copperhead Road Geosciences, LLC, 2006-2013 (also CEO, CFO, secretary, custodian, & technician).

•Professor and Head, Department of Geography, College of Geosciences, Texas A&M University, 1997 - 2000.

•Assistant to Full Professor, Department of Geography, East Carolina University, 1988- 1997. Also adjunct professor of geology.

•Assistant Professor, Department of Geography, Arizona State University, 1986-1988.

•Executive Director, Pamlico-Tar River Foundation, Washington, N.C., 1984-86.

•Various part-time research and teaching positions: Rutgers University, East Carolina University, Pitt County Community College; 1980-1984.

•Various full- and part-time journalism positions: Washington, N.C., Vanceboro, N.C., Christiansburg, Va., 1977-84.

Education

Ph.D., 1985, Rutgers University. Major: Geography/Geomorphology.

M.A., 1982, East Carolina University. Major: Physical Geography.

B.A., 1979, Virginia Tech. Major: Communications. Minor: Environmental science.

North Carolina High School Equivalency Certificate, 1975.

Publications--refereed articles, chapters, and books (*indicates student at time of submission).

Phillips, J.D. 2025. *Mysterious Ways. Contingency, Emergence, and Selection in Nature.* Oxford University Press (in press).

Phillips, J.D. 2024. Sequential changes in coastal plain rivers affected by rising sea-level. *Hydrology* 11, 124. https:// doi.org/10.3390/hydrology11080124

Phillips, J.D. 2024. Embedded complexity of evolutionary sequences. *Entropy 26*, 458. https://doi.org/10.3390/e26060458

Phillips, J.D. 2024. Ghost cypress as indicators of sea-level rise in the Neuse River, North Carolina. *Wetlands Ecology and Management* 32, 287-302. https://doi.org/1007/s11273-024-09977-0

Nascimento, D.L., Chiapini, M., Vidal-Torrado, P., **Phillips, J.D.**, Bernades Ladeira, D.F., da Silva Camargo, R., Valezio, E.V. 2024. The underestimated role of leaf-cutting ants in soil and geomorphological development in neotropical America. *Earth-Science Reviews* 248, 04650. DOI:10.1016/j.earscirev.2023.104650

Delong, M.D., Thoms, M.C., Fuller, I.C., Tunnicliffe, J., **Phillips, J.D.,** Cossart, R. 2024. Understanding changing riverine landscapes: instability, thresholds, and tipping points. In Thoms, M., Fuller, I. (eds.), *Resilience and Riverine Landscapes.* Amsterdam, Elsevier, p. 69-95. https://doi.org/10.1016/B978-0-323-91716-2.00029-7

Lorz, C., Waroszewski, J., Mailander, R., **Phillips, J.D.,** Kleber, A. 2024. Influence of cover beds on soils. *Mid-Latitude Slope Deposits (Cover Beds)(2nd ed.)*, Kleber, A., Terhorst, B., eds.) Amsterdam, Elsevier, p.115-148. https://doi.org/10.1016/B978-0-323-96003-8.00004-9

Corenblit, D., Corbara, B., Lala, K., **Phillips, J.D**., Pocheville, A., Roussel, E., Steiger, J., Till-Bottraud, I., Viles, H.A. 2023. Revisiting the geomorphologicalbiological divide: an introspective biogeomorphological perspective. *Earth Surface Processes and Landforms* 49, 197-209. DOI: 10.1002/esp.5729.

Phillips, J.D. 2023. Why everything is connected to everything else. *Ecological Complexity* 54-55, 101051.

Phillips, J.D. 2023. Contingent partitioning and adaptation in hydrological systems. *Ecohydrology* 16, e2567, https://doi.org/10.1002/eco.2567.

Phillips, J.D. 2023. Landscape change and climate attribution, with an example from estuarine marshes. *Geomorphology* 430: 108666.

Šamonil P., Daněk P., Lutz J.A., Anderson-Teixeira, K.J., Jaroš J., **Phillips J.D.,** Rousová A., Adam D., Larson, A.J., Kašpar J., Janik D., Vašíčková I., Gonzalez-Akre E., Egli M. 2023. Tree mortality may drive landscape formation: comparative study from ten temperate forests. *Ecosystems* 26, 257-76.

Phillips, J.D. 2022. Store and pour: The evolution of flow systems in landscapes. *Catena* 216: 106357.

Phillips, J.D. 2022. Geomorphology of the fluvial-estuarine transition zone, Neuse River, North Carolina. *Earth Surface Processes and Landforms* 47: 2044-2061. doi: <u>https://doi.org/10.1002/esp.5362</u>

Phillips, J.D. 2022. The law of scale independence. *Annals of GIS* 28, 15-29. DOI: 10.1080/19475683.2022.2026466

Phillips, J.D. 2022. Geomorphic impacts of Hurricane Florence on the lower Neuse River: Portents and particulars. *Geomorphology* 397, 108026.

Šamonil, P., **Phillips, J.D**., Bobek, P., Danek, P. 2021. Stromy formují šumavskou krajinu. Ziva 6/2021, 282-284 (in Czech).

Phillips, J.D. 2021. *Landscape Evolution. Landforms, Ecosystems, and Soils.* Elsevier, Amsterdam.

Phillips, J.D., Šamonil, P. 2021. Biogeomorphological Domination of Forest Landscapes: An Example From the Šumava Mountains, Czech Republic. *Geomorphology* 383, 107698.

Phillips, J.D., Marion, D.A., *Kilcoyne, K. 2021. Fine sediment storage in an eroding forest trail system. *Physical Geography* 42, 50-72. https://doi.org/10.1080/02723646.2020.1743613.

Šamonil, P., **Phillips, J.D**., Pawlik, Ł. 2020. Indirect biogeomorphic and soil evolutionary effects of spruce bark beetle. *Global and Planetary Change* 195: 103317.

Phillips, J.D., Marion, D.A., *Kilcoyne, K. 2020. Concentration and divergence of sediment in an erosional landscape. *Geomorphology* 367: 107281.

*Jerin, T., **Phillips, J.D**. 2020. Biogeomorphic Keystones and Equivalents: Examples from a Bedrock Stream. *Earth Surface Processes and Landforms* 45, 1877-1894. DOI: 10.1002/esp.4853.

Šamonil, P., **Phillips, J.D**., *Daněk, P., Beneš, V., Pawlik, Ł. 2020. Soil, regolith, and weathered rock: Theoretical concepts and evolution in old-growth temperate forests, central Europe. *Geoderma* 368, 114261.

Phillips, J.D., 2020. Evolutionary creativity in landscapes. *Earth Surface Processes and Landforms* 45, 109-120.

Phillips, J.D., 2019. State factor analysis of ecosystem response to climate change. *Ecological Complexity* 40(A) 100789.

Phillips, J.D., Pawlik, L., Samonil, P., 2019. Weathering fronts. *Earth-Science Reviews* 198: 102295.

Phillips, J.D., Marion, D.A., 2019. Coarse sediment storage and connectivity and off-highway vehicle use, Board Camp Creek, Arkansas. *Geomorphology* 344: 99-112.

Phillips, J.D., 2019. Evolutionary pathways in soil-geomorphic systems. *Soil Science* 184: 1-12.

Marion, D.A., **Phillips, J.D**., Yocum, C., Jahnz, J., 2019. Sediment availability and off-highway vehicle trails in the Ouachita Mountains, USA. *Journal of the American Water Resources Association* <u>https://doi.org/10.1111/1752-1688.12793</u>.

Phillips, J.D., 2018. Place formation and axioms for reading the natural landscape. *Progress in Physical Geography* 42: 697-720.

Phillips, J.D., 2018. Self-limited biogeomorphic ecosystem engineering in epikarst soils. *Physical Geography* 39: 304-328.

Phillips, J.D., 2018. Environmental gradients and complexity in coastal landscape response to sea level rise. *Catena* 169: 107-118.

Phillips, J.D., 2018. Historical contingency in fluviokarst landscape evolution. *Geomorphology* 303: 41-52.

Phillips, J.D., 2018. Coastal wetlands, sea-level, and the dimensions of geomorphic resilience. *Geomorphology* 305: 173-184.

Phillips, J.D., 2018. Tipping points in Texas Rivers. *Earth Surface Processes and Landforms* 43: 1768-1781.

Šamonil, P., *Danek, P., Senecka A., Adam, D., **Philips, J.D**., 2018. Biomechanical effects of trees in an old-growth temperate forest. *Earth Surface Processes and Landforms* 43: 1063-1072.

Phillips, J.D., 2017. Geomorphic and hydraulic unit richness and complexity in a coastal plain river. *Earth Surface Processes and Landforms* 42: 2623-2639.

Šamonil, P., Danek, P., Adam, D., Phillips, J.D., 2017. Breakage or uprooting:

how tree death type affects hillslope processes in old-growth temperate forests. *Geomorphology* 299: 76-84.

James, L.A., **Phillips, J.D**., Lecce, S.A., 2017. A Centennial Tribute to G.K. Gilbert's "Hydraulic Mining Débris in the Sierra Nevada." *Geomorphology* 294, 4-19.

James, L.A., **Phillips, J.D**., Lecce, S.A., 2017. Preface to anthropic fluvial sedimentation: Centennial celebration of G.K. Gilbert's "Hydraulic Mining Débris in the Sierra Nevada." *Geomorphology* 294: 1-3.

Phillips, J.D., 2017. Landform transitions in a fluviokarst landscape. *Zeitchschrift für Geomorphologie* 61/2: 109-122.

Phillips, J.D., 2017. Soil complexity and pedogenesis. *Soil Science* 182: 117-127.

Phillips, J.D., Van Dyke, C., 2017. Geomorphological state-and-transition models. *Catena* 153: 168-181.

Phillips, J.D., 2017. Laws, place, history and the interpretation of landforms. *Earth Surface Processes & Landforms* 42: 347-354.

*Jerin, T., **Phillips, J.D.,** 2017. Local efficiency in fluvial systems: Lessons from Icicle Bend. *Geomorphology* 282: 119-130.

Phillips, J.D., Šamonil, P., Pawlik, L., Trochta, J., *Daněk, P., 2017. Domination of hillslope denudation by tree uprooting in an old-growth forest. *Geomorphology* 276: 27- 36.

*Abd-Elmabod, S.K., Jordan, A., Fleskens, L., **Phillips, J.D.**, Munoz-Rojas, M., van der Ploeg, M., Anaya-Romero, M., El-Ashry, S., de la Rosa, D. 2017. Modeling agricultural suitability along soil transects under current conditions and improved scenario of soil factors. *Soil Mapping & Process Modeling for Sustainable Land Use Management* (ed. P. Pereira, E.C. Brevik, M. Munoz-Rojas, B.A. Miller). Amsterdam: Elsevier, p. 193-219.

Pawlik, L., **Phillips, J.D**., Šamonil, P., 2016. Roots, rock, and regolith: biomechanical and biochemical weathering by trees and its impact on hillslopes -A critical literature review. *Earth-Science Reviews* 159: 142-159.

Phillips, J.D., 2016. Complexity of Earth surface system evolutionary pathways. *Mathematical Geosciences* 48: 743-765. DOI 10.1007/s11004-016-9642-1

Phillips, J.D., 2016. Vanishing point: scale independence in geomorphic hierarchies. *Geomorphology* 266: 66-74.

*Daněk, P., Šamonil, P., Phillips, J.D., 2016. Geomorphic controls of soil spatial

complexity in a primeval mountain forest in the Czech Republic. *Geomorphology* 273: 280-291.

Shouse, M.L., **Phillips, J.D.**, 2016. Soil deepening by trees and the effects of parent material. *Geomorphology* 269: 1-7.

Phillips, J.D., *Van Dyke, C., 2016. Principles of geomorphic disturbance and recovery in response to storms. *Earth Surface Processes and Landforms* 41: 971-979. DOI: 10.1002/esp.3912.

Phillips, J.D., 2016. Biogeomorphology and contingent ecosystem engineering in karst landscapes. *Progress in Physical Geography* 40: 503-526. DOI: 10.1177/0309133315624641

Phillips, J.D., 2016. Landforms as extended composite phenotypes. *Earth Surface Processes & Landforms* 41: 16-26.

Phillips, J.D., 2016. Identifying sources of soil landscape complexity with spatial adjacency graphs. *Geoderma* 267: 58-64.

Phillips, J.D., 2015. Stream buffers. In *Texas Riparian Areas* (Hardy, T.B., Davis, N.A., eds.). Texas A&M University Press, p. 23-29.

Phillips, J.D., 2015. Riparian geomorphology. In *Texas Riparian Areas* (Hardy, T.B., Davis, N.A., eds.). Texas A&M University Press, p. 31-46.

Phillips, J.D., Schwanghart, W., Heckmann, T., 2015. Graph theory in the geosciences. *Earth-Science Reviews* 143: 147-160.

Heckmann, T., Schwanghart, W., **Phillips, J.D.**, 2015. Graph theory—recent developments and its application in geomorphology. *Geomorphology* 243, 130-146.

Phillips, J.D., 2015. Badass geomorphology. *Earth Surface Processes & Landforms* 40, 22-33.

Phillips, J.D., Marion, D.A., Yocum, C., Mehlhope, S.H., Olson, J.W. 2015. Geomorphological impacts of a tornado disturbance in a subtropical forest. *Catena* 125, 111-119.

Phillips, J.D., 2015. Hydrologic and geomorphic flow thresholds in the lower Brazos River, Texas, USA. *Hydrological Sciences Journal* 60, 1631-1648.

Phillips, J.D., 2015. The robustness of chronosequences. *Ecological Modelling* 298: 16-23.

Lin, H., Vogel, H.-J., **Phillips, J.D**., Fath, B.D., 2015. Complexity of soils and hydrology in ecosystems. *Ecological Modelling* 298: 1-3 (introduction to special

issue co-edited by the authors).

Fei, S., **Phillips, J.D.**, *Shouse, M.A., 2014. Biogeomorphic impacts of invasive species. *Annual Review of Ecology, Evolution, and Systematics* 45: 69-87.

Phillips, J.D., 2014. Anastamosing channels in the lower Neches River valley, Texas. *Earth Surface Processes and Landforms* 39:1888-1899

Phillips, J.D., 2014. Thresholds, mode-switching and emergent equilibrium in geomorphic systems. *Earth Surface Processes and Landforms* 39: 71-79. DOI: 10.1002/esp.3492 (invited State of the Science contribution).

Marion, D.A., **Phillips, J.D**., Yocum, C., *Mehlhope, S.H., 2014. Stream channel responses and soil loss at off-highway vehicle stream crossings in the Ouachita National Forest. *Geomorphology* 216: 40-52.

Phillips, J.D., 2014. State transitions in geomorphic responses to environmental change. *Geomorphology* 204: 208-216.

Phillips, J.D., 2013. Sources of spatial complexity in two coastal plain soil landscapes. *Catena* 111: 98-103.

Lorz, C., Frühauf, M., Mailänder, R., **Phillips, J.D.,** Kleber, A., 2013. Influence of cover beds on soils. In Kleber, A., Terhorst, B., eds., *Mid-Latitude Slope Deposits (Cover Beds)*, Developments in Sedimentology vol. 66. Amsterdam: Elsevier, p. 115-148.

Phillips, J.D., 2013. Watershed fragmentation in coastal plain rivers. *Physical Geography* 34: 273-292.

Kim, D., **Phillips, J.D.**, 2013. Predicting the structure and mode of vegetation dynamics: an application of graph theory to state-and-transition models. *Ecological Modelling* 265: 64-73.

Phillips, J.D. 2013. Geomorphic responses to changes in instream flows: the flow-channel fitness model. *River Research and Applications* 29: 1175-1194.

Phillips, J.D., 2013. Evaluating taxonomic adjacency as a source of soil map uncertainty. *European Journal of Soil Science* 64: 391-400.

Phillips, J.D., 2013. Nonlinear dynamics, divergent evolution, and pedodiversity. *Pedodiversity* (Ibanez, J.J., Bockheim, J., eds). Boca Raton, FL: CRC Press, p. 59-82.

Phillips, J.D., 2013. Networks of historical contingency in Earth surface systems. *Journal of Geology* 121: 1-16.

Phillips, J.D. 2013. Hydrological connectivity of abandoned channel water

bodies on a coastal plain river. River Research and Applications 29: 149-160.

Phillips, J.D., 2012. Storytelling in Earth sciences: the eight basic plots. *Earth-Science Reviews* 115: 153-162.

Phillips, J.D. 2012. Logjams and avulsions in the San Antonio River delta. *Earth Surface Processes and Landforms* 37: 936-950.

Phillips, J.D. 2012. Synchronization and scale in geomorphic systems. *Geomorphology* 137: 150-158.

Phillips, J.D. 2011. Drainage area and incised valley fills in Texas rivers: a potential explanation. *Sedimentary Geology* 242: 65-70.

Phillips, J.D. 2011. The structure of ecological state transitions: amplification, synchronization, and constraints. *Ecological Complexity* 8, 336-346.

Phillips, J.D. 2011. Emergence and pseudo-equilibrium in geomorphology. *Geomorphology* 132: 319-326.

Phillips, J.D. 2011. Disturbance and responses in geomorphic systems. *The Sage Handbook of Geomorphology* (K.J. Gregory, A.S. Goudie, eds.). London: Sage, p. 555- 566.

Phillips, J.D. 2011. Universal and local controls of avulsions in southeast Texas rivers. *Geomorphology* 130: 17-28.

Phillips, J.D. 2011. Predicting modes of spatial change from state-and-transition models. *Ecological Modelling* 222: 475-484.

Phillips, J.D. 2011. Evolutionary geomorphology: thresholds and nonlinearity in landform response to environmental change. *Models and Applications of Chaos Theory in Modern Sciences* (E. Zeraoulia, ed.). CRC Press. (Reprint of Phillips, 2006, Hydrology and Earth System Sciences 10: 731-742).

Slattery, M.C., **Phillips, J.D.** 2010. Controls on sediment delivery in coastal plain rivers. *Journal of Environmental Management* 92: 284-289.

Phillips, J.D. 2010. Relative importance of intrinsic, extrinsic, and anthropic factors in the geomorphic zonation of the Trinity River, Texas. *Journal of the American Water Resources Association* 46: 807-823.

Phillips, J.D. 2010. Amplifiers, filters, and the response of Kentucky rivers to climate change. *Climatic Change* 103: 571-595.

Slattery, M.C., *Todd, L.M., **Phillips, J.D**., *Breyer, J.A. 2010. Holocene sediment accretion in the Trinity River delta, Texas, in relation to modern fluvial input. *Journal of Soils and Sediments* 10: 640-651.

Phillips, J.D. 2010. The convenient fiction of steady-state soil thickness. *Geoderma* 156: 389-398.

Phillips, J.D. 2010. The job of the river. *Earth Surface Processes and Landforms* 35: 305- 313.

Phillips, J.D., *McCormack, S., *Duan, J., *Russo, J.P., *Schumacher, A.M., *Tripathi, G.N., *Brockman, R.B., *Mays, A.B., *Pulugurtha, S.P. 2010. Origin and interpretation of knickpoints in the Big South Fork River basin, Kentucky-Tennessee. *Geomorphology* 114: 188-198.

Phillips, J.D., *Park, L. 2009. Forest blowdown impacts of Hurricane Rita on fluvial systems. *Earth Surface Processes and Landforms* 34: 1069-1081.

Phillips, J.D. 2009. Landscape evolution space and the relative importance of geomorphic processes and controls. *Geomorphology* 109: 79-85.

Phillips, J.D. 2009. Changes, perturbations, and responses in geomorphic systems. *Progress in Physical Geography* 33: 17-30.

Phillips, J.D. 2009. Biological energy in landscape evolution. *American Journal of Science* 309: 271-290.

Phillips, J.D. 2009. Soils as extended composite phenotypes. *Geoderma* 149: 143-151.

Phillips, J.D. 2009. Avulsion regimes in southeast Texas rivers. *Earth Surface Processes and Landforms* 34: 75-87.

Phillips, J.D., *Lutz, J.D. 2008. Profile convexities in bedrock and alluvial streams. *Geomorphology* 102: 554-566.

Phillips, J.D., Marion, D.A., Turkington, A.V. 2008. Pedologic and geomorphic impacts of a tornado blowdown event in a mixed pine-hardwood forest. *Catena* 75: 278-287.

Phillips, J.D., Lorz, C. 2008. Origins and implications of soil layering. *Earth-Science Reviews* 89: 144-155.

Phillips, J.D. 2008. Soil system modeling and generation of field hypotheses. *Geoderma* 145: 419-425.

Phillips, J.D. 2008. Geomorphic controls and transition zones in the lower Sabine River. *Hydrological Processes* 22: 2424-2437.

Phillips, J.D. 2008. Goal functions in ecosystem and biosphere evolution. *Progress in Physical Geography* 32: 51-64.

Phillips, J.D., Slattery, M.C. 2008. Antecedent alluvial morphology and sea level controls on form-process transition zones in the lower Trinity River, Texas. *River Research and Applications* 24: 293-309.

Phillips, J.D., Turkington, A.V., Marion, D.A. 2008. Weathering and vegetation effects in early stages of soil formation. *Catena* 72: 21-28.

Phillips, J.D., 2007. Perfection and complexity in the lower Brazos River. *Geomorphology* 91: 364-377.

Phillips, J.D., Marion, D.A., 2007. Soil geomorphic classification, soil taxonomy, and effects on soil richness assessments. *Geoderma* 141: 89-97.

Phillips, J.D., Gomez, B. 2007. Controls on sediment export from the Waipaoa River basin, New Zealand. *Basin Research* 19: 241-252.

Phillips, J.D., 2007. Formation of texture contrast soils by a combination of bioturbation and translocation. *Catena* 70: 92-104.

Phillips, J.D. 2007. The perfect landscape. *Geomorphology* 84: 159-169.

Phillips, J.D., Marden, M., Gomez, B. 2007. Residence time of alluvium in an aggrading fluvial system. *Earth Surface Processes and Landforms* 32: 307-316.

Phillips, J.D., Slattery, M.C. 2007. Downstream trends in discharge, slope, and stream power in a coastal plain river. *Journal of Hydrology* 334: 290-303.

Chin, A., **Phillips, J.D**. 2007. The self-organization of step-pools in mountain streams. *Geomorphology* 83: 346-358.

Phillips, J.D. 2006. Evolutionary geomorphology: thresholds and nonlinearity in landform response to environmental change. *Hydrology and Earth System Sciences* 10: 731-742.

Slattery, M.C., Gares, P.A., **Phillips, J.D**. 2006. Multiple modes of runoff generation in a North Carolina coastal plain watershed. *Hydrological Processes* 20: 2953-2969.

Phillips, J.D., Slattery, M.C. 2006. Sediment storage, sea level, and sediment delivery to the ocean by coastal plain rivers. *Progress in Physical Geography* 30: 513-530.

Lorz, C., **Phillips, J.D**. 2006. Pedo-ecological consequences of lithological discontinuities in soils--examples from Central Europe. *Journal of Plant Nutrition and Soil Science* 169: 573-581.

Phillips, J.D., Marion, D.A. 2006. The biomechanical effects of trees on soils and regoliths: beyond treethrow. *Annals of the Association of American Geographers*

96: 233-247.

Phillips, J.D. 2006. Deterministic chaos and historical geomorphology: A review and look forward. *Geomorphology* 76: 109-121.

Gares, P.A., Slattery, M.C., Pease, P., **Phillips, J.D**. 2006. Eolian sediment transport on North Carolina Coastal Plain Agricultural Fields. *Soil Science* 171: 784-799.

Phillips, J.D., Slattery, M.C., *Musselman, Z.A. 2005. Channel adjustments of the lower Trinity River, Texas, downstream of Livingston Dam. *Earth Surface Processes and Landforms* 30: 1419-1439.

*Wellmeyer, J.L., Slattery, M.C., **Phillips, J.D**. 2005. Quantifying downstream impacts of impoundment on flow regime and channel planform, lower Trinity River, Texas. *Geomorphology* 69: 1-13.

Phillips, J.D., Marion, D.A., Luckow, K., *Adams, K.R. 2005. Nonequilibrium regolith thickness in the Ouachita Mountains. *Journal of Geology* 113: 325-340.

Phillips, J.D., Luckow, K., Marion, D.A., *Adams, K.R. 2005. Rock fragment distributions and regolith evolution in the Ouachita Mountains. Earth Surface Processes and Landforms 30: 429-442.

Phillips, J.D., 2005. Weathering, instability, and landscape evolution. *Geomorphology* 67: 255-272. Special issue on Weathering and Landscape Evolution, Proceedings of the 35th Binghamton Geomorphology Symposium. Turkington, A.V., Campbell, S.W., Phillips, J.D., editors.

Turkington, A.V., **Phillips, J.D.**, Campbell, S.W. 2005. Weathering and landscape evolution: introduction. *Geomorphology* 67: 1-6. Special issue on Weathering and Landscape Evolution, Proceedings of the 35th Binghamton Geomorphology Symposium. Turkington, A.V., Campbell, S.W., Phillips, J.D., editors.

Phillips, J.D. 2005. Entropy analysis of multiple scale causality and qualitative causal shifts in spatial systems. *Professional Geographer* 57: 83-93.

Phillips, J.D., Marion, D.A. 2005. Biomechanical effects, lithological variations, and local pedodiversity in some forest soils of Arkansas. *Geoderma* 124: 73-89.

Yeager, K.M., Santschi, P.H., **Phillips, J.D**., Herbert, B.E. 2005. Suspended sediment sources and tributary effects in the lower reaches of a coastal plain stream as indicated by radionuclides, Loco Bayou, Texas. *Environmental Geology* 47: 382-395.

Phillips, J.D. 2004. Geogenesis, pedogenesis and multiple causality in the formation of texture-contrast soils. *Catena* 58: 275-295.

Phillips, J.D. 2004. Divergence, sensitivity, and nonequilibrium in ecosystems. *Geographical Analysis* 36: 369-383.

Phillips, J.D., Slattery, M.C., *Musselman, Z.A. 2004. Dam-to-delta sediment inputs and storage in the lower Trinity River, Texas. *Geomorphology* 62: 17-34.

Phillips, J.D., *Walls, M.D. 2004. Flow partitioning and unstable divergence in fluviokarst evolution in central Kentucky. *Nonlinear Processes in Geophysics* 11: 371-381.

Phillips, J.D., *Martin, L.L., *Nordberg, V.G., *Andrews, W.A. 2004. Divergent evolution in fluviokarst landscapes of central Kentucky. *Earth Surface Processes and Landforms* 29: 799-819.

Turkington, A.V., **Phillips, J.D**. 2004. Cavernous weathering, dynamical instability and self-organization. *Earth Surface Processes and Landforms* 29: 665-675.

Phillips, J.D. 2004. Doing justice to the law. *Annals of the Association of American Geographers* 94: 290-293.

Phillips, J.D. 2004. Independence, contingency, and scale linkage in physical geography. *Scale and Geographic Inquiry. Nature, Society, and Method* (E. Sheppard, R.B. McMaster, eds.). Oxford: Blackwell, pp. 86-100.

Phillips, J.D. 2004. Laws, contingencies, irreversible divergence, and physical geography. *Professional Geographer* 56: 37-43.

Phillips, J.D., Marion, D.A. 2004. Pedological memory in forest soil development. *Forest Ecology and Management* 188: 363-380.

Phillips, J.D. 2003. Impacts of surface mine valley fills on headwater floods in eastern Kentucky. *Environmental Geology* 45: 367-380.

Phillips, J.D. 2003. Alluvial storage and the long term stability of sediment yields. *Basin Research* 15: 153-163.

Phillips, J.D. 2003. Sources of nonlinear complexity in geomorphic systems. *Progress in Physical Geography* 26: 339-361.

Phillips, J.D. 2003. Toledo Bend Reservoir and geomorphic response in the lower Sabine River. *River Research and Applications* 19: 137-159.

Phillips, J.D., *Musselman, Z.A. 2003. The effect of dams on fluvial sediment delivery to the Texas coast. *Coastal Sediments '03*. Proceedings of the 5th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, Clearwater Beach, Florida, p. 1-14.

Phillips, J.D. 2002. Geomorphic impacts of flash flooding in a forested headwater basin. *Journal of Hydrology* 269: 236-250.

*Yeager, K.M., Santschi, P.H., **Phillips, J.D.**, Herbert, B.E. 2002. Sources of alluvium in a coastal plain stream based on radionuclide signatures from the ²³⁸U and ²³²Th decay series. *Water Resources Research* 38: 1243, doi: 10.1029/2001WR000956.

Slattery, M.C., Gares, P.A., **Phillips, J.D.** 2002. Slope-channel linkage and sediment delivery on North Carolina coastal plain cropland. *Earth Surface Processes and Landforms* 27: 1377-1387.

Phillips, J.D. 2002. Erosion, isostasy, and the missing peneplains. *Geomorphology* 45: 225-241.

Phillips, J.D. 2002. Spatial structures and scale in categorical maps. *Geographical and Environmental Modelling* 6: 41-57.

Phillips, J.D. 2002. Global and local factors in earth surface systems. *Ecological Modelling* 149: 257-272.

Phillips, J.D. 2001. Human impacts on the environment and the primacy of place. *Physical Geography* 22: 321-332.

Phillips, J.D. 2001. The relative importance of intrinsic and extrinsic factors in pedodiversity. *Annals of the Association of American Geographers* 91: 609-621.

Phillips, J.D. 2001. Contingency and generalization in pedology, as exemplified by texture-contrast soils. *Geoderma* 102: 347-370.

Phillips, J.D. 2001. Inherited versus acquired complexity in east Texas weathering profiles. *Geomorphology* 40: 1-14.

Phillips, J.D., Marion, D.A. 2001. Residence times of alluvium in an east Texas stream as indicated by sediment color. *Catena* 45: 49-71.

Phillips, J.D. 2001. Sedimentation in bottomland hardwoods downstream of an east Texas dam. *Environmental Geology* 40: 860-868.

Phillips, J.D. 2001. Divergent evolution and the spatial structure of soil landscape variability. *Catena* 43: 101-113.

Phillips, J.D. 2000. Rapid development of ferricretes on a subtropical valley side slope. *Geografiska Annaler* 82A: 69-78.

Phillips, J.D. 2000. Signatures of divergence and self-organization in soils and weathering profiles. *Journal of Geology* 108: 91-102.

Phillips, J.D. 1999. Methodology, scale, and the field of dreams. *Annals of the Association of American Geographers* 89: 754-760.

Phillips, J.D. 1999. Spatial analysis in physical geography and the challenge of deterministic uncertainty. *Geographical Analysis* 31: 359-372.

Phillips, J.D. 1999. Divergence, convergence, and self-organization in landscapes. *Annals of the Association of American Geographers* 89: 466-488.

Phillips, J.D., Slattery, M.C., Gares, P.A. 1999. Truncation and accretion of soil profiles on coastal plain croplands: Implications for sediment redistribution. *Geomorphology* 28: 119-140.

Phillips, J.D. 1999. Edge effects in geomorphology. Physical Geography 20: 53-66.

Phillips, J.D., Gares, P.A., Slattery, M.C. 1999. Agricultural soil redistribution and landscape complexity. *Landscape Ecology* 14: 197-211.

Phillips, J.D. 1999. Event timing and sequence in coastal shoreline erosion: Hurricanes Bertha and Fran and the Neuse estuary. *Journal of Coastal Research* 15: 616-623.

Phillips, J.D. 1999. *Earth Surface Systems. Complexity, Order, and Scale.* Oxford, UK: Basil Blackwell.

Gomez, B., Phillips, J.D. 1999. Deterministic uncertainty in bedload transport. *Journal of Hydraulic Engineering* 125: 305-308.

Phillips, J.D., *Golden, H.,*Cappiella, K., *Andrews, B., *Middleton, T., *Downer, D., *Kelli, D., *Padrick, L. 1999. Soil redistribution and pedologic transformations on coastal plain croplands. *Earth Surface Processes and Landforms* 24: 23-39.

Phillips, J.D. 1998. On the relations between complex systems and the factorial model of soil formation (with discussion and response). *Geoderma* 86: 1-43.

Slattery, M.C., Gares, P.A., **Phillips, J.D.** 1998. Quantifying soil erosion and sediment delivery on North Carolina coastal plain croplands. *Conservation Voices* 1(2): 20-25.

Magilligan, F.J., **Phillips, J.D.**, Gomez, B., James, L.A. 1998. Geomorphic and sedimentological controls on the effectiveness of an extreme flood. *Journal of Geology* 106: 87-95.

Gomez, B., **Phillips, J.D.,** Magilligan, F.J., James, L.A. 1997. Floodplain sedimentation and sensitivity. *Earth Surface Processes and Landforms* 22: 923-936.

Phillips, J.D. 1997. Human agency, Holocene sea level, and floodplain accretion in coastal plain rivers. *Journal of Coastal Research* 13: 854-866.

Phillips, J.D. 1997. A short history of a flat place: Three centuries of geomorphic change in the Croatan. Annals of the Association of American Geographers 87: 197-216.

Phillips, J.D. 1997. Humans as geological agents and the question of scale. *American Journal of Science* 297: 98-115.

Phillips, J.D. 1997. Simplexity and the reinvention of equifinality. *Geographical Analysis* 29: 1-15.

Phillips, J.D., *Lampe, M., *King, R.T., *Cedillo, M., *Beachley, R., *Grantham, C. 1997. Ferricrete formation in the North Carolina Coastal Plain. *Zeitschrift fur Geomorphologie* 41: 67-81.

Phillips, J.D. 1996. Natural and legal shoreline buffers. In *Estuarine Shores* (K. Nordstrom, C. Roman, eds.). New York: John Wiley , pp. 449-465.

Phillips, J.D., *Perry, D., *Carey, K., *Garbee, A.R., *Stein, D., *Morde, M.B., *Sheehy, J. 1996. Deterministic uncertainty and complex pedogenesis in some Pleistocene dune soils. *Geoderma* 73: 147-164.

Phillips, J.D. 1996. Nonlinear dynamics and predictability in geomorphology. In *The Scientific Nature of Geomorphology* (B. Rhoads, C. Thorn, eds.). Proceedings of the 27th Binghamton Geomorphology Symposium. New York: John Wiley, pp. 315-336.

Phillips, J.D. 1996. Wetland buffers and runoff hydrology. In *Wetlands: Buffers, Boundaries & Gradients* (G. Mulamoottil, B.G. Warner, E.A. McBean, eds.). Boca Raton, FL: Lewis Publishers, pp. 207-220.

Phillips, J.D., Renwick, W.H. 1996. Surface instability and human modification in geomorphic systems. In *Companion Encyclopedia of Geography: The Environment and Humankind* (I.Douglas, R. Huggett, M. Robinson, eds.) London: Routledge, pp. 553-572.

Gomez, B., Mertes, L., **Phillips, J.D.**, Magilligan, F.J., James, L.A. 1995. Sediment characteristics on an extreme flood: 1993 Upper Mississippi River valley. *Geology* 23: 963-6.

Phillips, J.D. 1995. Self-organization and landscape evolution. *Progress in Physical Geography* 19: 309-21.

Phillips, J.D. 1995. Nonlinear dynamics and the evolution of relief. *Geomorphology* 14:57-64.

Phillips, J.D. 1995. Biogeomorphology and landscape evolution: The problem of scale. *Geomorphology* 13: 337-47. Also published in Biogeomorphology: Terrestrial and Freshwater Systems (Proceedings of the 26th Binghamton Geomorphology Symposium).

Phillips, J.D. 1995. Decoupling of sediment sources in large river basins. *Effects of Scale on Interpretation and Management of Sediment and Water Quality.* (W.R. Osterkamp, ed.). International Association of Hydrological Sciences publication 226, p. 11-16.

Phillips, J.D. 1995. Time lags and emergent stability in morphogenic/pedogenic system models. *Ecological Modelling* 78: 267-76.

Phillips, J.D. 1994. The forgotten hardwoods of the coastal plain. *The Geographical Review* 84: 162-171.

Phillips, J.D. 1994. Deterministic uncertainty in landscapes. *Earth Surface Processes and Landforms* 19: 389-401.

Phillips, J.D., *Gosweiler, J., *Tollinger, M., *Mayeux, S., *Gordon, R., *Altieri, T., *Wittmeyer, M. 1994. Edge effects and spatial variability in coastal plain Ultisols. *Southeastern Geographer* 34:125-137.

Phillips, J.D. 1993. Chaotic evolution of some coastal plain soils. *Physical Geography* 14: 566-580.

Phillips, J.D. 1993. Biophysical feedbacks and the risks of desertification. *Annals of the Association of American Geographers* 83:630-640.

Phillips, J.D. 1993. Progressive and regressive pedogenesis and complex soil evolution. *Quaternary Research* 40:169-176.

Phillips, J.D. 1993. Stability implications of the state factor model of soils as a nonlinear dynamical system. *Geoderma* 58:1-15.

Phillips, J.D. 1993. Pre- and post-colonial sediment sources and storage in the lower Neuse River basin, North Carolina. *Physical Geography* 14: 272-284.

Phillips, J.D., *Wyrick, M., *Robbins, G., *Flynn, M. 1993. Accelerated erosion on the North Carolina Coastal Plain. *Physical Geography* 14:114-130.

Phillips, J.D. 1993. The source of sediments in the Neuse River estuary: Water quality management implications. *Coastal Zone '93* (O.T. Magoon, et al., eds.). New York: American Society of Civil Engineers, pp. 883-892.

*Belk, D.R., **Phillips, J.D.** 1993. Hydrologic recovery of artificially-drained wetlands in coastal North Carolina. *Coastal Zone '93* (O.T. Magoon, ed.). New York: American Society of Civil Engineers, pp. 3254-3268.

Phillips, J.D. 1993. Spatial-domain chaos in landscapes. *Geographical Analysis* 25: 101-117.

Phillips, J.D. 1993. Interpreting the fractal dimension of river networks. In *Fractals in Geography* (N.S. Lam, L. De Cola, eds.). Englewood Cliffs, NJ: Prentice-Hall, pp. 142-157.

Phillips, J.D. 1993. Instability and chaos in hillslope evolution. *American Journal of Science* 293:25-48.

Phillips, J.D. 1992. Delivery of upper-basin sediment to the lower Neuse River, North Carolina, U.S.A. *Earth Surface Processes and Landforms* 17: 699-709.

Phillips, J.D. 1992. *Geomorphic Systems*. Amsterdam: Elsevier. (Edited with W.H. Renwick). Published as hardcover book, and as a special issue of *Geomorphology*, vol. 5.

Phillips, J.D. 1992. The end of equilibrium? In Geomorphic Systems, above. *Geomorphology* 5: 195-201.

Trofimov, A.M., **Phillips, J.D.** 1992. Theoretical and methodological premises of geomorphological forecasting. In Geomorphic Systems, above. *Geomorphology* 5: 203- 211.

Phillips, J.D. 1992. Nonlinear dynamical systems in geomorphology: Revolution or evolution? In Geomorphic Systems, above. *Geomorphology* 5: 219-229.

Phillips, J.D. 1992. Deterministic chaos in surface runoff. In *Overland Flow: Hydraulics and Erosion Mechanics* (A.J. Parsons, A.D. Abrahams, eds.). London: UCL Press, pp. 177-197.

Phillips, J.D. 1992. Qualitative chaos in geomorphic systems, with an example from wetland response to sea level rise. *Journal of Geology* 100: 365-374.

Phillips, J.D. 1992. The source of alluvium in large rivers of the lower Coastal Plain of North Carolina. *Catena* 19: 59-75.

Phillips, J.D., Holder, G.R. 1991. Large organic debris in the lower Tar River, North Carolina, 1879-1900. *Southeastern Geographer* 31: 55-66.

Phillips, J.D. 1991. Upstream pollution sources and coastal water quality protection in North Carolina. Coastal Management 19: 439-449.

Phillips, J.D. 1991. The human role in earth surface systems: Some theoretical considerations. *Geographical Analysis* 23: 316-331.

Phillips, J.D. 1991. Fluvial sediment budgets in the North Carolina Piedmont. *Geomorphology* 4: 231-241.

Phillips, J.D. 1991. Fluvial sediment delivery to a Coastal Plain estuary in the Atlantic Drainage of the United States. *Marine Geology* 98: 121-134.

Phillips, J.D. 1991. Multiple modes of adjustment in unstable river channel cross- sections. *Journal of Hydrology* 123: 39-49.

Phillips, J.D. 1990. Relative ages of wetland and upland surfaces as indicated by pedogenic development. *Physical Geography* 11: 363-378.

Phillips, J.D. 1990. Simple physical equations for estimating field scale erosion. *Papers and Proceedings of the Applied Geography Conference* 13: 70-79.

Phillips, J.D. 1990. A saturation-based model for wetland identification. *Water Resources Bulletin* 26: 333-342.

Phillips, J.D. 1990. Relative importance of factors influencing fluvial soil loss at the global scale. *American Journal of Science* 290: 547-568.

Phillips, J.D. 1990. The instability of hydraulic geometry. *Water Resources Research* 26: 739-744.

Phillips, J.D. 1989. Effect of buffer zones on estuarine and riparian land use in eastern North Carolina. Southeastern Geographer 29: 136-149.

Phillips, J.D. 1989. Fluvial sediment storage in wetlands. Water Resources Bulletin 25: 867-873.

Phillips, J.D. 1989. Estimating minimum achievable soil loss in developing countries. *Applied Geography* 9: 219-236.

Phillips, J.D. 1989. Minimum achievable soil loss: An alternative framework for soil conservation goal-setting. *Papers and Proceedings of the Applied Geography Conference* 12: 122-128.

Phillips, J.D. 1989. Nonpoint source pollution control effectiveness of riparian forests along a coastal plain river. *Journal of Hydrology* 110: 221-237.

Phillips, J.D. 1989. Nonpoint source pollution risk assessment in a watershed context. *Environmental Management* 13: 493-502.

Phillips, J.D. 1989. An evaluation of the state factor model of soil ecosystems. *Ecological Modelling* 45: 165-177.

Phillips, J.D. 1989. Evaluation of North Carolina's estuarine shoreline area of environmental concern from a water quality perspective. *Coastal Management* 17: 103-117.

Phillips, J.D. 1989. Evaluating estuarine shoreline buffer zones for nonpoint

source pollution control. *Coastal Zone '89* (O.T. Magoon, ed.). New York: American Society of Civil Engineers, pp. 399-411.

Phillips, J.D. 1989. Hillslope and channel sediment delivery and impacts of soil erosion on water resources. In *Sediment and the Environment* (R.F. Hadley, ed.). International Association of Hydrological Sciences, Publication 184, pp. 183-190.

Phillips, J.D. 1989. An evaluation of the factors determining the effectiveness of water quality buffer zones. *Journal of Hydrology* 107: 133-145.

Phillips, J.D. 1989. Erosion and planform irregularity of an estuarine shoreline. *Zeitschrift fur Geomorphologie* Suppl. 73: 59-71.

Phillips, J.D. 1989. River discharge and sediment deposition in the upper Pamlico estuary. In *Estuarine Circulation* (B.J. Neilson, A. Kuo, J. Brubaker, eds.). Clifton, N.J.: Humana Press, pp. 337-350.

Phillips, J.D. 1988. Nonpoint source pollution and spatial aspects of risk assessment. *Annals of the Association of American Geographers* 78: 611-623.

Phillips, J.D. 1988. The role of spatial scale in geomorphic systems. *Geographical Analysis* 20: 359-368.

Phillips, J.D. 1988. Incorporating fluvial change in hydrologic simulations: A case study in coastal North Carolina. *Applied Geography* 8: 25-36.

Phillips, J.D., Phillips, L.R. 1988. Delineation of shoreline buffer zones for stormwater pollution control. In *Coastal Water Resources* (W. Lyke, T. Hoban, eds.). Bethesda, Md.: American Water Resources Association, pp. 351-358.

Phillips, L.R., **Phillips, J.D.** 1988. Land use planning techniques for estuarine shoreline buffer zone establishment. In *Coastal Water Resources* (W. Lyke, T. Hoban, eds.). Bethesda, Md.:American Water Resources Association, pp. 635-640.

Phillips, J.D. 1987. Sediment budget stability in the Tar River basin, North Carolina. *American Journal of Science* 287: 780-794.

Phillips, J.D. 1987. Shoreline processes and establishment of Phragmites australis in a coastal plain estuary. *Vegetatio* 71: 139-144.

Phillips, J.D. 1987. Choosing the level of detail for depicting two-variable spatial relationships. *Mathematical Geology* 19(6): 539-547.

Phillips, J.D. 1986. Coastal submergence and marsh fringe erosion. *Journal of Coastal Research* 2: 427-436.

Phillips, J.D. 1986. The utility of the sediment budget concept in sediment

pollution control. Professional Geographer 38: 246-252.

Phillips, J.D. 1986. Sediment storage, sediment yield, and time scales in landscape denudation studies. *Geographical Analysis* 18: 161-167.

Phillips, J.D. 1986. Spatial analysis of shoreline erosion, Delaware Bay, New Jersey. *Annals of the Association of American Geographers* 76: 50-62.

Phillips, J.D. 1986. Measuring complexity of environmental gradients. *Vegetatio* 64: 95-102.

Phillips, J.D. 1985. Headland-bay beaches revisited: An example from Sandy Hook, New Jersey. *Marine Geology* 65: 21-31.

Phillips, J.D. 1985. Stability of artificially-drained lowlands: A theoretical assessment. *Ecological Modelling* 27: 69-79.

Phillips, J.D. 1985. Estimation of optimal beach profile sample intervals. *Journal of Coastal Research* 1: 187-191.

Phillips, J.D. 1985. Geomorphic processes and stability of coastal wetlands. *Coastal Zone '85*, Proceedings of the Fourth Symposium on Coastal and Ocean Management. New York: American Society of Civil Engineers, pp. 1481-1487.

Phillips, J.D. 1985. Transgression and vegetation change, Delaware Bay, New Jersey. *Gambling With the Shore*, Proceedings of the Ninth Annual Conference of the Coastal Society. Bethesda, Md.: The Coastal Society, pp. 167-173.

Phillips, J.D. 1984. Estimation of drainage areas in a homogeneous landscape. *Water Resources Bulletin* 20: 847-850.

Phillips, J.D., Steila, D. 1984. Hydrologic equilibrium status of a disturbed eastern North Carolina watershed. *GeoJournal* 9: 351-357.

Research Grants and Contracts (Dates, title, funding entity, amount, role).

2022. Specialist Report: Geomorphic Impacts of Post-Storm Recovery Plans at Neuse River Recreation Sites, North Carolina. USDA Forest Service, Croatan National Forest.

2019-2021. Biological Soil Creep. Czech Science Foundation, co-investigator.

2016-2018. Biomechanical Effects of Trees in Old-Growth Forests. Czech Science Foundation, \$56,000, co-investigator.

2013. Coevolution of Soils and Ecosystems in Unmanaged Forests of the Czech Republic. European Union, \$4,000. co-PI.

2012-13. Geomorphic Thresholds in the lower Brazos River, Texas. Texas

Instream Flow Program, \$45,000, PI.

2012. Geomorphology of the Lower Trinity River in the Vicinity of the Proposed Capers Ridge Pump Station for the Luce Bayou Interbasin Transfer Project. AECOM, Inc., Houston, TX. Amount withheld at client request.

2011. Geomorphic Responses to Changes in Flow Regimes in Texas Rivers. Texas Instream Flow Program, \$35,000, PI.

2011-12. Riparian Geomorphology and Buffer Zones. Texas Water Development Board, \$12,000, PI.

2011. Channel Cross Sections and Critical Flow Levels in Texas Streams. Subcontract to River Systems Institute, Texas State University, \$6,000.

2010-2013. Impacts of Off-Highway Vehicle Trails in the Ouachita National Forest. USDA Forest Service, \$60,000. P.I.

2010-11. Channel Change Caused by Water and Sediment Distribution in the San Antonio River Deltaic Plain. Guadalupe-Blanco River Authority, \$44,000, P.I.

2010. Hydraulic Units of the Sabine River. Texas Instream Flow Program. \$52,000, P.I.

2009-10. Geomorphic Study of the Guadalupe River, Texas. Texas Instream Flow Program. \$45,000, P.I.

2008. Texas/Louisiana Flow Split in the Sabine River/Cutoff Bayou Area. TCB, Inc., Houston Texas. Amount withheld at client's request. Consultant.

2007-2008. Geomorphic Processes, Controls, and Transition Zones in the Middle and Lower Trinity River. Texas Instream Flow Program, \$45,000. P.I.

2007-2008. Geomorphic Units of the Lower Sabine River. Texas Instream Flow Program, \$35,000. P.I.

2006-2007. Field-Based Analysis in support of a Geomorphic Assessment of the Brazos and Navasota River Subbasin. Texas Instream Flow Program, \$30,000. P.I.

2006-2007. Geomorphic Equilibrium in Southeast Texas Rivers. Texas Instream Flow Program, \$30,000. P.I.

2006-2007. Geomorphic Processes, Controls, and Transition Zones in the Lower Sabine River. Texas Water Development Board/U.S. Army Corps of Engineers, \$65,000. P.I.

2005-2006. Geomorphic Context, Constraints, and Change in the Lower Brazos

and Navasota Rivers, Texas. Texas Instream Flow Program, \$28,000. P.I.

2004-2006. Fluviokarst Landscape Whole-System Sensitivity to Land Use Changes, Kentucky River, U.S.A. U.S. Environmental Protection Agency, Science to Achieve Results Program, \$37,172. Co-investigator.

2004-2006. Effects of trees on bedrock weathering, soil thickness, and rock fragment occurrence in Ouachita Mountain Soils. U.S. Forest Service, \$20,817 plus in-kind support. P.I.

2004-2005. Relative Importance of Fluvial and Non-Fluvial Sediment Sources in Galveston Bay. Texas Water Development Board. \$61,000. Co-P.I.

2003-2005. Sediment production and alluvial buffering in a steepland river basin Waipoa River, New Zealand. National Science Foundation, \$250,000, Co-P.I.

2001-2004. Sediment retention in the lower Trinity River. Texas Water Development Board, \$65,000. P.I.

2002-2003. Coevolution of forests and soils in the Ouachita Mountains. U.S. Forest Service, \$16,600 plus USFS in-kind support. P.I.

2001-2002. Pedologic effects of forest changes in the Ouachita mountains region. U.S. Forest Service, \$20,000 plus USFS in-kind support. P.I.

1999-2000. Radionuclide signatures of fluvial sediment in Caney Creek, Texas. U.S. Forest Service \$7,000 and Texas A&M College of Geosciences Research Enhancement Fund match, \$7,000. Pl.

1999-2001. Sediment retention in bottomland hardwoods of the Angelina River, Texas. Texas Water Development Board, \$50,000. PI 1999/2000; co-PI 2000/2001.

1998-2000. Mission Geography. NASA. Total project funding \$950,000; Phillips portion \$10,000. Earth System Science Consultant.

1995-1998. Quantifying soil erosion and sediment delivery on North Carolina Coastal Plain croplands. U.S. Department of Agriculture, \$149,000. Co-Pl.

1994-1995. Pre-settlement landscapes of the Croatan National Forest. U.S. Forest Service, \$10,000. PI.

1993-1994. Overbank sedimentation during the upper Mississippi River flood, 1993. National Science Foundation, \$22,000. Co-PI.

1990. Basinwide water quality and natural resource management plan for the Pamlico- Tar River basin. Pamlico-Tar River Foundation, Inc., \$6,500. Project Director.

1988-1989. Marina siting policy for the Pamlico River and western Pamlico Sound. Pamlico-Tar River Foundation, Inc., \$5,515. Project Director.

1987. Nonpoint source pollution spatial risk assessment. Environmental Science and Engineering Fellowship, American Association for the Advancement of Science and U.S. Environmental Protection Agency, \$20,000. Pl/Fellow.

1984. Geomorphic evaluation of beach nourishment, South Beach, Sandy Hook, N.J. National Park Service, \$5000. Co-PI.

1983-1984. Impacts of beach nourishment, South Beach, Sandy Hook, N.J. National Park Service, \$12,000. Co-PI.

Internal research grants: University of Kentucky, 2007; Texas A&M University, 1999; East Carolina University, 1992; 1990; 1989; Arizona State University, 1987.

Other Professional Grants and Contracts

1993. Physical geography data acquisition system. National Science Foundation, \$13,000. Co-PI.

1985-1987. Water quality and coastal resource management in the Pamlico-Albemarle region, North Carolina. Mary Flagler Cary Charitable Trust, \$22,000. Project Director.

1985-1987. Water quality and pollution control in the Pamlico-Tar River watershed, North Carolina. Z. Smith Reynolds Foundation, \$50,000. Project Director.

1986-1987. Environmental education and outdoor recreation in Medoc Mountain State Park. North Carolina Division of Parks and Recreation, \$1,000. Project Director.

1985. Pamlico-Tar River Maritime Heritage Festival. National Endowment for the Humanities, \$3,140. Project Director.

Professional Memberships & Service

Member, Current: European Geosciences Union, Southeastern Division Association of American Geographers, International Association of Geomorphologists, International Association of Hydrological Sciences, International Union of Soil Scientists.

Member, Past (pre-retirement): American Geophysical Union, American Association of Geographers, Society of Wetland Scientists, American Water Resources Association, Soil Conservation Society of America. International Conference on Hydropedology, 2012, program committee and session co- organizer .

International Union of Soil Sciences, Symposium Co-Organizer, 2006 World Congress of Soil Science.

Manuscript reviewer for 59 separate scholarly journals of geography, geology, environmental science, hydrology, and soil science.

Proposal reviewer for four U.S. federal agencies, eight foreign agencies, six state agencies, and six private organizations or foundations.

External tenure and promotion reviewer for 36 U.S. universities and four non-U.S. universities. Program reviews for three U.S. and one Canadian university.

Editorial board memberships, previous and current: Geomorphology, Geoderma, Catena, Earth Surface Processes & Landforms, Transactions of the Institute of British Geographers, New Zealand Geographer, The Professional Geographer, Annals of the Association of American Geographers, Annual Review of Chaos and Bifurcations, Southeastern Geographer, Geographical Analysis, Focus

Awards (post-PhD)

2020. World's Greatest Farter. Coffee mug awarded by Morgan, Nate, Caroline, and Andy Phillips.

2017. Melvin Marcus Distinguished Career Award. Geomorphology Specialty Group, Association of American Geographers.

2014. David Linton Medal. British Society for Geomorphology.

2006. University Research Professor. University of Kentucky.

1999. Distinguished Achievement Award for Research. College of Geosciences, Texas A&M University.

1997. G.K. Gilbert Award for Excellence in Geomorphic Research. Geomorphology Specialty Group, Association of American Geographers.

1995. Research Honors Award. Southeastern Division, Association of American Geographers.

1990. Great Blue Heron Award for environmental advocacy, Pamlico-Tar River Foundation, Inc.

1990. Research Achievement Award for New Scholars, Conference of Southern Graduate Schools.

1989. College Research Award, College of Arts and Sciences, East Carolina University.

1987. Environmental Science and Engineering Fellowship, American Association for the Advancement of Science.

Personal

Born: 4 November 1957, Roxboro, North Carolina, USA.

Family: Married to Lynn Roche Phillips since 18 June 1983. Sons: Nathan Scott Phillips, born 18 June 1988; Damien Matthew Phillips, born 18 February, 1996. Granddaughter: Caroline Harper Phillips, born 19 August, 2014; grandson Andrew Scott Phillips, born 16 November, 2017.

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